

IN THE TITLE

Please replace "MECHANICALLY ROBUST PAD INTERFACE AND METHOD THEREFORE" with -- METHOD FOR FORMING A SEMICONDUCTOR DEVICE HAVING A MECHANICALLY ROBUST PAD INTERFACE--.

CLEANED VERSION OF MARKED-UP CLAIM(S):

1. A method of forming a semiconductor device, comprising:
- forming an uppermost interconnect level over a semiconductor substrate, wherein the uppermost interconnect level includes an interconnect portion and a bond pad;
  - forming a passivation layer over the uppermost interconnect level;
  - removing portions of the passivation layer, wherein removing portions of the passivation layer exposes portions of the bond pad and forms a plurality of support structures overlying the uppermost surface of the bond pad; and
  - forming a conductive capping layer overlying the plurality of support structures, wherein the conductive capping layer electrically contacts the bond pad.
2. The method of claim 1, wherein a copper content of uppermost interconnect level is at least 90 atomic percent.
3. The method of claim 1, further comprising forming dielectric studs within the bond pad, wherein at least a portion of a support structure overlies a portion of a dielectric stud.
4. The method of claim 1, wherein the dielectric layer includes a material selected from a group consisting of a nitrogen, a hydrogen, and a carbon containing silicon oxide.
5. The method of claim 1, wherein the plurality of support structures are interconnected with unremoved portions of the passivation layer.

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6. The method of claim 5, wherein forming the uppermost interconnect level further comprises forming the bond pad over at least one dielectric layer having a Young's modulus less than approximately 50 Giga Pascals.
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8. The method of claim 1, further comprising forming a barrier layer between the capping layer and the bond pad, wherein the barrier layer overlies the support structures and abuts exposed portions of the bond pad excluded by the support structures.
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